

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P1213150

Luminaire Tested: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

Issue Date: 3/29/2018

Test Information

Test Method: LM-79-2019
Report Number: P1213150
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33518)
Test Lab: INNOVATIONS CENTER-P3
Issue Date: 3/29/2018
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

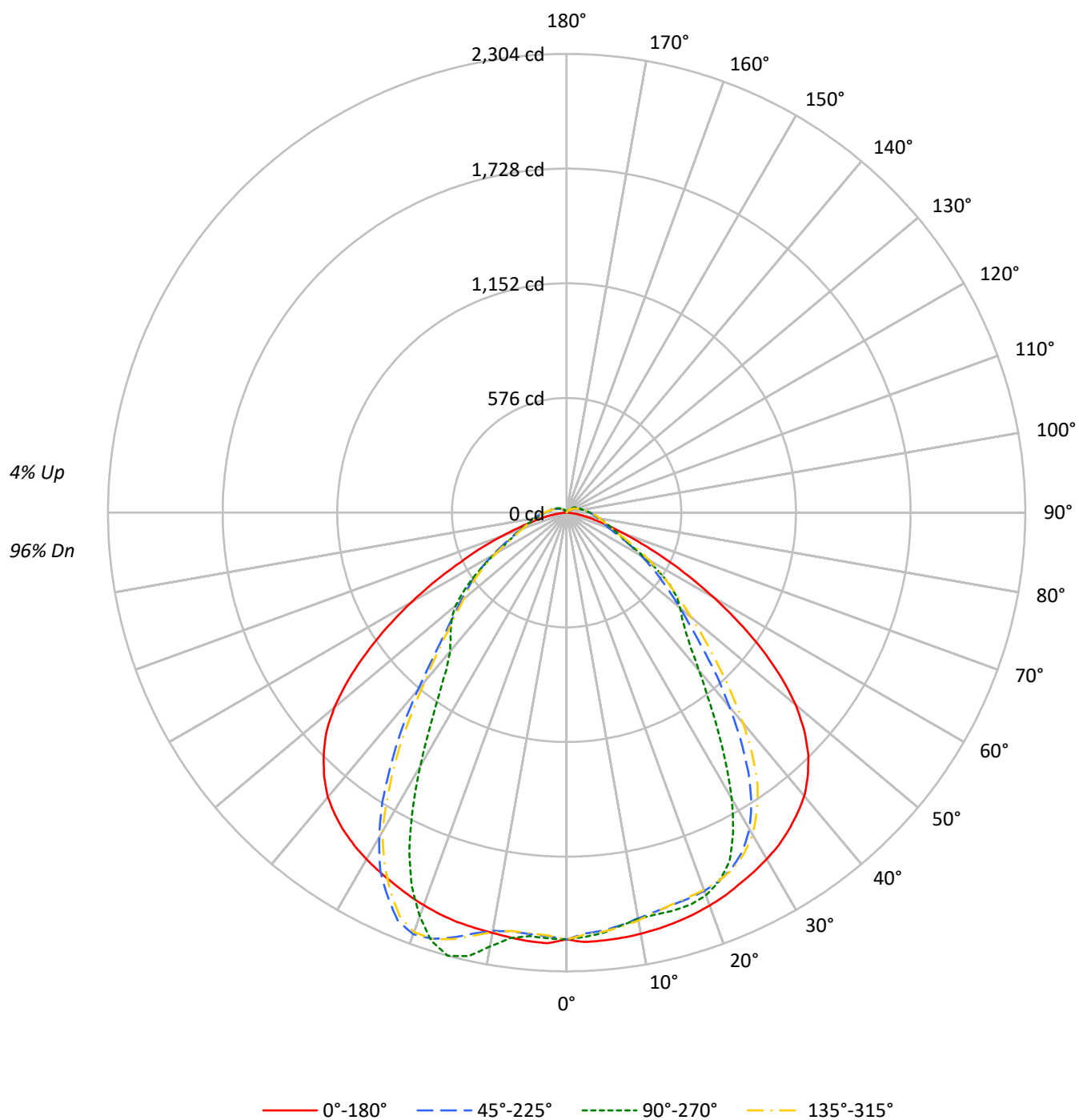
Lumens per Lamp: N/A
Luminaire Lumens: 5110.0 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	17322	17322	17322	17322
5°	17448	16635	17484	16766
10°	17528	15943	17492	17026
15°	17664	15730	17655	17515
20°	17859	15481	17840	16318
25°	18079	14686	18069	14190
30°	18419	12728	18430	11276
35°	18780	10293	18834	8709
40°	19098	8287	19177	7301
45°	19030	7020	19129	6835
50°	18211	6462	18465	6318
55°	16157	5809	16561	5280
60°	13104	4446	13800	4077
65°	9742	3402	10496	3226
70°	6626	2936	7468	2808
75°	4334	2649	5047	2506
80°	2803	2470	3281	2273
85°	1435	2464	1892	2250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 180°

Vertical Angle: 45°

Luminance: 19129 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.6	4.0
10°-20°	605.8	11.9
20°-30°	921.0	18.0
30°-40°	988.0	19.3
40°-50°	857.5	16.8
50°-60°	635.5	12.4
60°-70°	364.1	7.1
70°-80°	201.6	3.9
80°-90°	122.8	2.4
90°-100°	79.8	1.6
100°-110°	53.5	1.0
110°-120°	36.1	0.7
120°-130°	22.2	0.4
130°-140°	11.7	0.2
140°-150°	5.3	0.1
150°-160°	1.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1730.4	33.9
0°-40°	2718.4	53.2
0°-60°	4211.4	82.4
0°-90°	4899.9	95.9
90°-120°	169.4	3.3
90°-150°	208.5	4.1
90°-180°	210.0	4.1
0°-180°	5110.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2144	2144	2144	2144	2144	
5°	2157	2118	2161	2135	2157	206
15°	2129	2069	2128	2304	2129	602
25°	2057	1935	2056	1870	2057	951
35°	1945	1318	1951	1115	1945	1218
45°	1717	845	1726	823	1717	1315
55°	1198	633	1228	576	1198	1062
65°	544	321	586	304	544	548
75°	155	204	180	193	155	177
85°	21	141	28	128	21	28
90°	0	117	2	108	0	1
95°	1	96	0	92	1	1
105°	1	72	1	69	1	1
115°	1	59	1	53	1	1
125°	1	44	1	36	1	1
135°	1	28	1	23	1	1
145°	1	17	2	13	1	1
155°	2	8	2	7	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	

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CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2159.0	2153.5	2151.3	2146.8	2150.2	2163.4	2154.6	2140.2	2141.3	2115.8	2129.1
5°	2156.8	2150.2	2146.8	2142.4	2144.6	2156.8	2147.9	2133.6	2132.4	2107.0	2119.2
7.5°	2153.5	2146.8	2141.3	2138.0	2139.1	2149.1	2138.0	2121.4	2118.1	2090.4	2101.4
10°	2147.9	2143.5	2135.8	2130.2	2129.1	2140.2	2122.5	2105.9	2098.1	2069.3	2080.4
12.5°	2140.2	2133.6	2125.8	2115.8	2114.7	2121.4	2107.0	2083.7	2076.0	2052.7	2064.9
15°	2129.1	2121.4	2112.5	2101.4	2095.9	2100.3	2082.6	2061.6	2060.5	2040.5	2057.2
17.5°	2116.9	2105.9	2095.9	2080.4	2072.7	2076.0	2061.6	2042.8	2045.0	2032.8	2051.6
20°	2100.3	2088.2	2072.7	2057.2	2046.1	2051.6	2041.7	2027.3	2030.6	2021.7	2038.3
22.5°	2081.5	2064.9	2046.1	2028.4	2019.5	2027.3	2019.5	2007.3	2008.4	2002.9	2012.9
25°	2057.2	2038.3	2016.2	1994.0	1989.6	1995.2	1990.7	1980.8	1976.3	1967.5	1971.9
27.5°	2035.0	2014.0	1986.3	1963.0	1955.3	1966.4	1956.4	1939.8	1927.6	1915.4	1906.6
30°	2009.5	1984.1	1953.1	1926.5	1919.9	1924.3	1909.9	1884.4	1852.3	1836.8	1812.5
32.5°	1981.9	1948.7	1909.9	1880.0	1875.6	1872.3	1845.7	1809.1	1759.3	1728.3	1690.7
35°	1945.3	1908.8	1862.3	1825.8	1819.1	1800.3	1757.1	1708.4	1644.2	1591.0	1526.8
37.5°	1904.4	1861.2	1812.5	1763.7	1744.9	1707.3	1646.4	1595.5	1498.0	1433.8	1356.3
40°	1857.9	1805.8	1746.0	1687.4	1656.4	1595.5	1525.7	1450.4	1356.3	1269.9	1204.6
42.5°	1793.6	1738.3	1667.4	1602.1	1549.0	1468.1	1386.2	1279.9	1193.5	1120.5	1054.0
45°	1717.2	1650.8	1568.9	1490.3	1422.7	1326.4	1230.1	1123.8	1051.8	966.6	921.2
47.5°	1618.7	1546.7	1459.3	1371.8	1283.2	1176.9	1076.2	974.3	902.4	841.5	808.2
50°	1502.5	1436.0	1339.7	1235.6	1138.2	1027.5	926.7	850.3	780.6	742.9	717.5
52.5°	1358.5	1296.5	1198.0	1085.0	990.9	882.4	790.5	728.5	678.7	651.0	642.2
55°	1198.0	1143.7	1046.3	941.1	844.8	745.1	675.4	621.1	589.0	572.4	573.5
57.5°	1026.4	984.3	892.4	798.3	707.5	632.2	569.1	525.9	501.6	500.4	503.8
60°	854.7	823.7	744.0	663.2	583.5	522.6	476.1	446.2	430.7	431.8	430.7
62.5°	690.9	662.1	604.5	538.1	475.0	434.0	391.9	379.8	366.5	365.4	365.4
65°	543.6	521.5	475.0	427.4	379.8	353.2	332.2	317.8	307.8	305.6	306.7
67.5°	408.6	399.7	367.6	335.5	305.6	289.0	271.3	267.9	260.2	260.2	262.4
70°	304.5	297.8	280.1	261.3	249.1	238.0	229.2	229.2	228.1	227.0	232.5
72.5°	220.3	221.4	215.9	201.5	200.4	198.2	196.0	199.3	200.4	203.7	210.4
75°	155.0	158.3	158.3	156.1	160.5	166.1	169.4	174.9	181.6	186.0	193.8
77.5°	109.6	109.6	115.1	121.8	130.6	140.6	149.5	157.2	166.1	171.6	178.3
80°	70.9	74.2	83.0	95.2	107.4	120.7	132.9	142.8	151.7	160.5	165.0
82.5°	42.1	47.6	58.7	74.2	89.7	106.3	118.5	130.6	140.6	149.5	152.8
85°	21.0	28.8	42.1	58.7	75.3	93.0	108.5	119.6	130.6	138.4	142.8
87.5°	6.6	15.5	29.9	45.4	63.1	80.8	97.4	109.6	119.6	126.2	130.6
90°	0.0	7.8	21.0	37.6	54.3	72.0	87.5	100.8	110.7	116.3	119.6
92.5°	0.0	4.4	16.6	31.0	46.5	64.2	79.7	91.9	100.8	106.3	108.5
95°	1.1	3.3	12.2	25.5	41.0	57.6	72.0	83.0	91.9	97.4	98.5
97.5°	1.1	2.2	10.0	21.0	35.4	50.9	65.3	76.4	83.0	88.6	89.7
100°	1.1	2.2	7.8	18.8	31.0	45.4	58.7	68.6	76.4	80.8	81.9
102.5°	1.1	1.1	6.6	15.5	27.7	39.9	52.0	62.0	68.6	73.1	75.3
105°	1.1	1.1	5.5	13.3	24.4	35.4	46.5	56.5	62.0	66.4	68.6
107.5°	1.1	1.1	4.4	11.1	21.0	31.0	42.1	49.8	56.5	60.9	63.1
110°	1.1	1.1	3.3	10.0	17.7	27.7	36.5	44.3	50.9	55.4	57.6

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.1	1.1	3.3	8.9	15.5	24.4	32.1	39.9	45.4	49.8	53.1
115°	1.1	1.1	3.3	7.8	14.4	21.0	28.8	35.4	41.0	45.4	48.7
117.5°	1.1	1.1	3.3	6.6	12.2	18.8	25.5	32.1	36.5	41.0	44.3
120°	1.1	1.1	2.2	5.5	11.1	16.6	22.1	27.7	33.2	37.6	41.0
122.5°	1.1	1.1	2.2	5.5	8.9	14.4	19.9	24.4	29.9	33.2	36.5
125°	1.1	1.1	2.2	4.4	7.8	13.3	17.7	22.1	25.5	29.9	33.2
127.5°	1.1	1.1	2.2	4.4	6.6	11.1	15.5	19.9	23.3	26.6	28.8
130°	1.1	1.1	2.2	3.3	5.5	8.9	13.3	16.6	21.0	23.3	25.5
132.5°	1.1	1.1	1.1	3.3	4.4	6.6	10.0	14.4	17.7	21.0	22.1
135°	1.1	1.1	1.1	2.2	4.4	5.5	7.8	11.1	14.4	17.7	19.9
137.5°	1.1	1.1	1.1	2.2	3.3	5.5	6.6	8.9	12.2	14.4	17.7
140°	1.1	1.1	1.1	2.2	3.3	4.4	5.5	7.8	10.0	12.2	14.4
142.5°	1.1	1.1	1.1	2.2	2.2	3.3	4.4	6.6	7.8	10.0	12.2
145°	1.1	1.1	1.1	2.2	2.2	3.3	4.4	5.5	6.6	7.8	10.0
147.5°	1.1	1.1	1.1	2.2	2.2	2.2	3.3	4.4	5.5	6.6	7.8
150°	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	4.4	5.5	6.6
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	3.3	4.4	5.5
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3	3.3	4.4	4.4
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2124.7	2126.9	2140.2	2139.1	2136.9	2134.7	2134.7	2132.4	2134.7	2140.2	2138.0
5°	2113.6	2116.9	2126.9	2125.8	2123.6	2122.5	2121.4	2118.1	2120.3	2128.0	2125.8
7.5°	2093.7	2097.0	2105.9	2101.4	2098.1	2100.3	2094.8	2091.5	2095.9	2103.7	2102.5
10°	2072.7	2074.9	2085.9	2083.7	2078.2	2079.3	2073.8	2071.5	2077.1	2081.5	2082.6
12.5°	2058.3	2066.0	2076.0	2074.9	2073.8	2074.9	2069.3	2067.1	2070.4	2074.9	2073.8
15°	2054.9	2064.9	2076.0	2076.0	2077.1	2078.2	2072.7	2069.3	2072.7	2076.0	2074.9
17.5°	2051.6	2063.8	2073.8	2072.7	2073.8	2076.0	2067.1	2064.9	2069.3	2073.8	2071.5
20°	2040.5	2051.6	2058.3	2056.0	2056.0	2057.2	2046.1	2046.1	2052.7	2056.0	2057.2
22.5°	2009.5	2022.8	2022.8	2017.3	2017.3	2012.9	2009.5	2002.9	2010.7	2016.2	2020.6
25°	1963.0	1968.6	1961.9	1949.8	1943.1	1937.6	1922.1	1935.4	1935.4	1952.0	1957.5
27.5°	1897.7	1885.5	1866.7	1841.3	1835.7	1818.0	1808.0	1811.4	1816.9	1840.1	1857.9
30°	1790.3	1753.8	1721.7	1710.6	1686.2	1668.5	1650.8	1659.7	1669.6	1682.9	1719.5
32.5°	1648.6	1613.2	1561.1	1542.3	1516.8	1494.7	1473.7	1487.0	1504.7	1513.5	1553.4
35°	1485.8	1443.8	1396.2	1364.1	1337.5	1325.3	1298.7	1317.6	1336.4	1343.0	1377.3
37.5°	1313.1	1269.9	1227.9	1200.2	1174.7	1167.0	1149.3	1162.5	1176.9	1186.9	1215.7
40°	1149.3	1109.4	1077.3	1058.5	1040.8	1034.1	1027.5	1033.0	1044.1	1051.8	1074.0
42.5°	1008.6	976.5	954.4	943.3	931.1	922.3	923.4	925.6	931.1	947.8	957.7
45°	885.8	866.9	852.5	850.3	842.6	841.5	840.4	844.8	848.1	858.1	865.8
47.5°	787.2	779.5	776.1	780.6	783.9	779.5	781.7	787.2	793.9	793.9	792.7
50°	709.7	711.9	716.4	726.3	733.0	735.2	737.4	744.0	745.1	747.4	744.0
52.5°	646.6	648.8	661.0	676.5	684.2	687.6	692.0	698.6	698.6	700.8	696.4
55°	582.4	585.7	597.9	613.4	620.0	624.5	628.9	633.3	636.6	641.1	637.7
57.5°	511.5	521.5	529.2	533.7	538.1	541.4	544.7	545.8	552.5	553.6	559.1
60°	436.2	438.4	446.2	445.1	441.8	450.6	446.2	453.9	461.7	471.7	472.8
62.5°	364.3	365.4	370.9	368.7	373.1	372.0	375.3	375.3	380.9	385.3	390.8
65°	307.8	308.9	313.3	313.3	312.2	315.5	318.9	321.1	321.1	324.4	328.8
67.5°	265.7	269.0	273.5	275.7	277.9	277.9	281.2	282.3	284.5	285.7	287.9
70°	236.9	241.4	245.8	248.0	249.1	251.3	252.4	252.4	254.7	255.8	258.0
72.5°	215.9	220.3	223.7	223.7	225.9	227.0	227.0	228.1	229.2	231.4	233.6
75°	198.2	201.5	203.7	202.6	202.6	202.6	203.7	203.7	205.9	208.2	210.4
77.5°	181.6	184.9	184.9	182.7	182.7	182.7	182.7	183.8	184.9	187.1	189.3
80°	169.4	169.4	168.3	168.3	166.1	165.0	165.0	166.1	166.1	168.3	171.6
82.5°	156.1	156.1	155.0	153.9	152.8	151.7	151.7	152.8	153.9	155.0	157.2
85°	143.9	143.9	141.7	141.7	140.6	140.6	140.6	140.6	141.7	142.8	145.0
87.5°	131.8	130.6	129.5	128.4	128.4	128.4	128.4	128.4	129.5	131.8	132.9
90°	119.6	118.5	117.4	117.4	116.3	116.3	117.4	117.4	118.5	119.6	120.7
92.5°	108.5	107.4	106.3	106.3	105.2	105.2	106.3	105.2	107.4	107.4	108.5
95°	98.5	97.4	96.3	96.3	96.3	96.3	96.3	96.3	97.4	97.4	98.5
97.5°	89.7	88.6	87.5	87.5	88.6	87.5	88.6	88.6	88.6	89.7	90.8
100°	81.9	80.8	80.8	81.9	80.8	80.8	81.9	81.9	81.9	81.9	83.0
102.5°	75.3	75.3	75.3	75.3	75.3	75.3	76.4	76.4	76.4	76.4	77.5
105°	68.6	69.8	69.8	69.8	70.9	70.9	70.9	72.0	72.0	72.0	72.0
107.5°	64.2	65.3	65.3	66.4	66.4	67.5	67.5	67.5	67.5	68.6	68.6
110°	59.8	60.9	62.0	63.1	63.1	64.2	64.2	64.2	64.2	64.2	64.2

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	55.4	56.5	57.6	59.8	60.9	60.9	60.9	60.9	62.0	62.0	60.9
115°	50.9	53.1	54.3	56.5	57.6	57.6	58.7	58.7	58.7	58.7	57.6
117.5°	46.5	49.8	50.9	53.1	54.3	54.3	55.4	55.4	55.4	55.4	54.3
120°	43.2	45.4	47.6	48.7	49.8	50.9	50.9	52.0	52.0	52.0	50.9
122.5°	39.9	42.1	44.3	45.4	46.5	47.6	47.6	47.6	47.6	47.6	47.6
125°	35.4	37.6	39.9	41.0	42.1	43.2	43.2	44.3	44.3	44.3	43.2
127.5°	32.1	34.3	35.4	37.6	38.8	38.8	39.9	39.9	39.9	39.9	38.8
130°	27.7	29.9	32.1	33.2	34.3	34.3	35.4	35.4	35.4	35.4	35.4
132.5°	24.4	26.6	27.7	29.9	29.9	31.0	31.0	32.1	32.1	32.1	31.0
135°	22.1	23.3	24.4	26.6	26.6	27.7	27.7	27.7	27.7	27.7	27.7
137.5°	19.9	21.0	22.1	23.3	23.3	24.4	24.4	24.4	24.4	25.5	24.4
140°	16.6	18.8	19.9	19.9	21.0	21.0	21.0	22.1	22.1	22.1	21.0
142.5°	14.4	15.5	16.6	17.7	18.8	18.8	18.8	18.8	19.9	18.8	18.8
145°	11.1	13.3	14.4	15.5	16.6	16.6	16.6	16.6	16.6	16.6	16.6
147.5°	8.9	10.0	12.2	13.3	13.3	14.4	14.4	14.4	14.4	14.4	14.4
150°	7.8	7.8	10.0	11.1	12.2	12.2	12.2	12.2	12.2	12.2	12.2
152.5°	5.5	6.6	7.8	8.9	10.0	10.0	10.0	10.0	10.0	10.0	10.0
155°	5.5	5.5	6.6	6.6	7.8	7.8	7.8	7.8	8.9	7.8	7.8
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2134.7	2133.6	2138.0	2133.6	2111.4	2120.3	2116.9	2129.1	2130.2	2133.6	2144.6
5°	2123.6	2123.6	2129.1	2124.7	2103.7	2112.5	2111.4	2123.6	2125.8	2128.0	2140.2
7.5°	2101.4	2102.5	2110.3	2107.0	2084.8	2098.1	2097.0	2111.4	2115.8	2120.3	2131.3
10°	2080.4	2079.3	2088.2	2084.8	2063.8	2079.3	2078.2	2092.6	2099.2	2107.0	2120.3
12.5°	2069.3	2066.0	2069.3	2066.0	2042.8	2054.9	2056.0	2072.7	2080.4	2090.4	2105.9
15°	2069.3	2063.8	2063.8	2057.2	2030.6	2038.3	2039.4	2050.5	2060.5	2070.4	2089.3
17.5°	2067.1	2061.6	2060.5	2054.9	2026.2	2026.2	2025.0	2032.8	2038.3	2048.3	2068.2
20°	2054.9	2052.7	2051.6	2048.3	2021.7	2017.3	2015.1	2015.1	2018.4	2021.7	2041.7
22.5°	2022.8	2025.0	2027.3	2029.5	2008.4	2000.7	2001.8	1999.6	1996.3	1996.3	2012.9
25°	1963.0	1974.1	1983.0	1992.9	1980.8	1975.2	1981.9	1978.5	1973.0	1968.6	1983.0
27.5°	1867.8	1891.1	1909.9	1934.3	1935.4	1930.9	1948.7	1946.4	1945.3	1938.7	1949.8
30°	1736.1	1772.6	1798.1	1833.5	1863.4	1867.8	1897.7	1902.1	1906.6	1903.3	1914.3
32.5°	1576.6	1626.5	1669.6	1725.0	1753.8	1779.3	1821.3	1839.0	1856.8	1862.3	1874.5
35°	1402.8	1459.3	1510.2	1571.1	1616.5	1671.9	1722.8	1749.4	1789.2	1804.7	1822.4
37.5°	1237.8	1291.0	1340.8	1401.7	1474.8	1532.3	1595.5	1655.2	1709.5	1731.6	1758.2
40°	1091.7	1134.9	1182.5	1235.6	1302.1	1377.3	1446.0	1529.0	1593.2	1637.5	1676.3
42.5°	981.0	1002.0	1043.0	1090.6	1143.7	1220.1	1289.9	1382.9	1460.4	1523.5	1587.7
45°	882.4	892.4	922.3	947.8	1002.0	1069.5	1143.7	1234.5	1315.3	1396.2	1473.7
47.5°	798.3	810.5	824.9	840.4	879.1	935.6	999.8	1081.7	1162.5	1256.7	1345.2
50°	741.8	745.1	747.4	754.0	777.2	816.0	868.0	937.8	1015.3	1116.0	1210.2
52.5°	692.0	692.0	685.3	682.0	690.9	715.2	745.1	795.0	874.7	967.7	1067.3
55°	638.8	628.9	626.7	615.6	617.8	628.9	643.3	682.0	747.4	827.1	923.4
57.5°	564.7	560.2	560.2	555.8	547.0	552.5	555.8	583.5	630.0	698.6	782.8
60°	479.4	477.2	482.7	483.8	476.1	479.4	478.3	494.9	528.1	583.5	653.2
62.5°	394.2	404.1	405.2	409.7	405.2	404.1	409.7	424.1	440.7	482.7	537.0
65°	331.0	336.6	337.7	343.2	341.0	341.0	345.4	356.5	366.5	395.3	437.3
67.5°	290.1	287.9	289.0	292.3	289.0	287.9	291.2	297.8	305.6	323.3	353.2
70°	258.0	255.8	255.8	255.8	251.3	248.0	249.1	251.3	254.7	264.6	283.4
72.5°	233.6	233.6	230.3	227.0	223.7	221.4	219.2	217.0	215.9	219.2	229.2
75°	211.5	212.6	211.5	208.2	203.7	199.3	194.9	190.4	184.9	182.7	183.8
77.5°	191.5	192.7	193.8	192.7	188.2	182.7	176.0	169.4	161.6	153.9	149.5
80°	173.8	176.0	177.2	176.0	172.7	168.3	160.5	152.8	141.7	131.8	120.7
82.5°	158.3	161.6	162.8	162.8	160.5	156.1	147.3	138.4	126.2	112.9	98.5
85°	146.1	148.4	150.6	150.6	149.5	145.0	136.2	126.2	114.0	98.5	83.0
87.5°	134.0	135.1	137.3	139.5	137.3	132.9	125.1	114.0	101.9	86.4	68.6
90°	121.8	122.9	125.1	127.3	126.2	121.8	115.1	105.2	91.9	75.3	57.6
92.5°	109.6	111.8	112.9	114.0	115.1	111.8	106.3	96.3	83.0	66.4	49.8
95°	100.8	100.8	103.0	104.1	105.2	101.9	97.4	87.5	75.3	59.8	43.2
97.5°	91.9	91.9	94.1	94.1	95.2	93.0	88.6	79.7	67.5	53.1	36.5
100°	83.0	84.1	85.3	86.4	86.4	85.3	80.8	72.0	60.9	47.6	32.1
102.5°	77.5	77.5	78.6	78.6	79.7	77.5	73.1	65.3	54.3	42.1	27.7
105°	72.0	72.0	73.1	73.1	72.0	69.8	65.3	58.7	48.7	36.5	24.4
107.5°	67.5	67.5	67.5	67.5	66.4	64.2	59.8	52.0	43.2	33.2	22.1
110°	64.2	63.1	63.1	62.0	60.9	57.6	53.1	46.5	38.8	28.8	18.8



TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	60.9	59.8	58.7	57.6	55.4	52.0	47.6	42.1	34.3	25.5	16.6
115°	57.6	56.5	55.4	53.1	50.9	47.6	43.2	37.6	29.9	22.1	14.4
117.5°	54.3	53.1	50.9	48.7	46.5	43.2	38.8	33.2	26.6	19.9	13.3
120°	49.8	48.7	47.6	45.4	43.2	38.8	34.3	29.9	23.3	17.7	11.1
122.5°	46.5	45.4	43.2	42.1	38.8	35.4	31.0	26.6	21.0	15.5	10.0
125°	42.1	41.0	39.9	37.6	35.4	31.0	27.7	23.3	18.8	13.3	7.8
127.5°	38.8	37.6	35.4	33.2	31.0	27.7	24.4	21.0	16.6	11.1	7.8
130°	34.3	33.2	32.1	29.9	27.7	24.4	22.1	17.7	14.4	10.0	6.6
132.5°	29.9	29.9	28.8	26.6	24.4	22.1	18.8	15.5	12.2	8.9	5.5
135°	27.7	26.6	25.5	23.3	22.1	18.8	16.6	13.3	10.0	7.8	4.4
137.5°	24.4	23.3	22.1	21.0	18.8	16.6	14.4	11.1	8.9	6.6	4.4
140°	21.0	19.9	19.9	17.7	16.6	14.4	12.2	10.0	7.8	5.5	3.3
142.5°	18.8	17.7	16.6	15.5	14.4	12.2	10.0	7.8	6.6	4.4	3.3
145°	16.6	15.5	14.4	13.3	12.2	10.0	8.9	6.6	5.5	4.4	3.3
147.5°	13.3	13.3	12.2	11.1	10.0	8.9	7.8	6.6	4.4	3.3	2.2
150°	11.1	11.1	10.0	8.9	8.9	7.8	6.6	5.5	4.4	3.3	2.2
152.5°	10.0	8.9	8.9	7.8	7.8	6.6	5.5	4.4	3.3	3.3	2.2
155°	7.8	7.8	7.8	6.6	6.6	5.5	4.4	4.4	3.3	2.2	2.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2146.8	2133.6	2144.6	2164.6	2162.3	2160.1	2157.9	2162.3	2176.7	2169.0	2156.8
5°	2143.5	2130.2	2142.4	2161.2	2160.1	2156.8	2154.6	2159.0	2173.4	2165.7	2152.4
7.5°	2136.9	2124.7	2133.6	2152.4	2152.4	2150.2	2147.9	2152.4	2165.7	2159.0	2145.7
10°	2125.8	2116.9	2125.8	2143.5	2144.6	2140.2	2138.0	2143.5	2156.8	2153.5	2142.4
12.5°	2116.9	2108.1	2118.1	2135.8	2136.9	2132.4	2129.1	2135.8	2153.5	2155.7	2152.4
15°	2104.8	2097.0	2109.2	2128.0	2128.0	2124.7	2124.7	2133.6	2157.9	2167.9	2173.4
17.5°	2087.0	2081.5	2095.9	2114.7	2115.8	2113.6	2114.7	2132.4	2164.6	2188.9	2204.4
20°	2064.9	2062.7	2078.2	2098.1	2101.4	2102.5	2108.1	2134.7	2178.9	2212.2	2227.7
22.5°	2038.3	2039.4	2057.2	2078.2	2082.6	2085.9	2097.0	2134.7	2190.0	2225.4	2232.1
25°	2008.4	2011.8	2030.6	2056.0	2061.6	2068.2	2087.0	2135.8	2193.3	2216.6	2205.5
27.5°	1976.3	1983.0	2007.3	2033.9	2040.5	2051.6	2076.0	2129.1	2177.8	2178.9	2138.0
30°	1943.1	1950.9	1979.7	2010.7	2021.7	2032.8	2062.7	2113.6	2140.2	2104.8	2032.8
32.5°	1905.5	1916.5	1945.3	1983.0	1996.3	2010.7	2040.5	2083.7	2073.8	1997.4	1894.4
35°	1857.9	1873.4	1906.6	1950.9	1963.0	1981.9	2002.9	2012.9	1968.6	1860.1	1743.8
37.5°	1799.2	1822.4	1861.2	1912.1	1925.4	1937.6	1943.1	1915.4	1826.9	1709.5	1588.8
40°	1731.6	1767.1	1809.1	1865.6	1878.9	1878.9	1859.0	1800.3	1688.5	1534.6	1400.6
42.5°	1649.7	1692.9	1746.0	1802.5	1815.8	1800.3	1752.7	1649.7	1522.4	1350.8	1209.0
45°	1550.1	1607.6	1667.4	1726.1	1732.7	1698.4	1613.2	1482.5	1325.3	1165.9	1030.8
47.5°	1431.6	1506.9	1572.2	1638.6	1629.8	1572.2	1458.2	1309.8	1143.7	993.1	884.6
50°	1298.7	1387.3	1460.4	1523.5	1504.7	1425.0	1291.0	1136.0	971.0	842.6	752.9
52.5°	1157.0	1258.9	1331.9	1382.9	1357.4	1262.2	1114.9	966.6	831.5	714.1	654.3
55°	1009.8	1112.7	1188.0	1227.9	1194.7	1091.7	946.6	811.6	684.2	607.8	572.4
57.5°	866.9	963.3	1034.1	1066.2	1024.1	921.2	787.2	673.2	581.3	517.1	499.3
60°	729.6	808.2	875.8	900.1	854.7	759.5	644.4	553.6	486.1	441.8	432.9
62.5°	602.3	666.5	719.7	738.5	694.2	620.0	520.4	452.8	405.2	383.1	372.0
65°	497.1	534.8	589.0	585.7	559.1	490.5	417.4	369.8	338.8	324.4	317.8
67.5°	390.8	425.2	459.5	463.9	430.7	383.1	335.5	301.2	284.5	276.8	273.5
70°	302.3	327.7	348.8	343.2	325.5	295.6	265.7	246.9	240.3	236.9	236.9
72.5°	234.7	248.0	258.0	251.3	240.3	224.8	210.4	202.6	203.7	205.9	208.2
75°	181.6	184.9	187.1	180.5	178.3	168.3	167.2	168.3	174.9	181.6	184.9
77.5°	139.5	135.1	131.8	125.1	126.2	125.1	130.6	139.5	149.5	159.4	168.3
80°	107.4	97.4	89.7	83.0	86.4	91.9	103.0	116.3	129.5	140.6	151.7
82.5°	83.0	68.6	57.6	50.9	57.6	66.4	80.8	97.4	112.9	125.1	137.3
85°	64.2	47.6	34.3	27.7	34.3	47.6	63.1	81.9	98.5	111.8	124.0
87.5°	49.8	34.3	18.8	11.1	18.8	33.2	50.9	68.6	85.3	100.8	112.9
90°	39.9	23.3	8.9	2.2	10.0	23.3	39.9	57.6	74.2	90.8	103.0
92.5°	32.1	16.6	4.4	0.0	5.5	17.7	33.2	49.8	66.4	81.9	94.1
95°	26.6	13.3	3.3	0.0	4.4	13.3	26.6	43.2	58.7	74.2	84.1
97.5°	22.1	10.0	2.2	0.0	2.2	11.1	22.1	36.5	52.0	66.4	76.4
100°	18.8	8.9	2.2	0.0	2.2	8.9	18.8	32.1	45.4	58.7	68.6
102.5°	15.5	6.6	1.1	1.1	1.1	6.6	16.6	27.7	39.9	52.0	62.0
105°	14.4	5.5	1.1	1.1	1.1	5.5	14.4	24.4	35.4	46.5	55.4
107.5°	12.2	4.4	1.1	1.1	1.1	4.4	12.2	21.0	32.1	42.1	49.8
110°	10.0	4.4	1.1	1.1	1.1	4.4	10.0	18.8	27.7	36.5	44.3

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	8.9	3.3	1.1	1.1	1.1	3.3	8.9	16.6	24.4	33.2	39.9
115°	7.8	3.3	1.1	1.1	1.1	3.3	7.8	14.4	21.0	28.8	35.4
117.5°	6.6	3.3	1.1	1.1	1.1	2.2	6.6	12.2	18.8	25.5	32.1
120°	5.5	2.2	1.1	1.1	1.1	2.2	5.5	11.1	16.6	22.1	27.7
122.5°	5.5	2.2	1.1	1.1	1.1	2.2	4.4	8.9	14.4	18.8	24.4
125°	4.4	2.2	1.1	1.1	1.1	1.1	4.4	7.8	12.2	16.6	21.0
127.5°	4.4	2.2	1.1	1.1	1.1	1.1	3.3	6.6	10.0	14.4	18.8
130°	3.3	2.2	1.1	1.1	1.1	1.1	2.2	5.5	8.9	12.2	15.5
132.5°	3.3	2.2	1.1	1.1	1.1	1.1	2.2	4.4	6.6	10.0	13.3
135°	3.3	1.1	1.1	1.1	1.1	1.1	1.1	3.3	5.5	7.8	10.0
137.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	4.4	5.5	8.9
140°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.3	4.4	6.6
142.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	3.3	5.5
145°	2.2	1.1	1.1	2.2	2.2	1.1	1.1	2.2	2.2	3.3	4.4
147.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2	3.3
150°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2154.6	2129.1	2142.4	2138.0	2142.4	2153.5	2152.4	2149.1	2151.3	2145.7	2140.2
5°	2150.2	2124.7	2138.0	2132.4	2138.0	2149.1	2146.8	2143.5	2146.8	2140.2	2134.7
7.5°	2144.6	2121.4	2136.9	2135.8	2145.7	2160.1	2161.2	2161.2	2169.0	2159.0	2154.6
10°	2144.6	2132.4	2153.5	2161.2	2186.7	2205.5	2207.7	2212.2	2225.4	2223.2	2212.2
12.5°	2167.9	2165.7	2196.7	2215.5	2238.7	2265.3	2279.7	2284.1	2293.0	2286.3	2281.9
15°	2197.8	2208.8	2243.2	2264.2	2289.7	2309.6	2312.9	2315.1	2321.8	2311.8	2304.1
17.5°	2237.6	2244.3	2271.9	2280.8	2297.4	2300.7	2296.3	2285.2	2285.2	2263.1	2256.4
20°	2256.4	2253.1	2264.2	2249.8	2243.2	2223.2	2204.4	2183.4	2182.3	2159.0	2156.8
22.5°	2239.8	2217.7	2194.4	2159.0	2143.5	2114.7	2089.3	2077.1	2069.3	2039.4	2031.7
25°	2181.2	2126.9	2092.6	2050.5	2012.9	1979.7	1955.3	1929.8	1905.5	1881.1	1870.0
27.5°	2079.3	2028.4	1973.0	1914.3	1862.3	1811.4	1770.4	1744.9	1721.7	1689.6	1673.0
30°	1954.2	1883.3	1822.4	1766.0	1680.7	1618.7	1584.4	1533.5	1515.7	1501.3	1470.3
32.5°	1806.9	1721.7	1638.6	1562.2	1474.8	1417.2	1371.8	1334.2	1323.1	1285.4	1276.6
35°	1644.2	1532.3	1438.2	1362.9	1299.8	1230.1	1192.4	1167.0	1144.8	1119.4	1114.9
37.5°	1452.6	1351.9	1245.6	1179.2	1129.3	1069.5	1040.8	1023.0	1013.1	994.3	990.9
40°	1260.0	1159.2	1086.2	1019.7	988.7	956.6	935.6	927.8	923.4	916.8	910.1
42.5°	1085.0	996.5	944.4	900.1	886.9	871.4	865.8	870.2	865.8	863.6	862.5
45°	936.7	869.1	832.6	819.3	816.0	811.6	816.0	823.7	824.9	822.6	822.6
47.5°	801.6	769.5	754.0	756.2	761.7	765.1	772.8	782.8	785.0	779.5	781.7
50°	713.0	694.2	690.9	699.7	711.9	716.4	725.2	733.0	731.9	729.6	727.4
52.5°	630.0	624.5	633.3	642.2	655.5	657.7	661.0	664.3	663.2	658.8	656.6
55°	560.2	564.7	572.4	575.7	585.7	584.6	585.7	585.7	581.3	579.1	575.7
57.5°	497.1	498.2	502.7	503.8	509.3	507.1	506.0	503.8	497.1	496.0	492.7
60°	432.9	430.7	440.7	432.9	437.3	432.9	431.8	426.3	419.6	418.5	416.3
62.5°	372.0	367.6	374.2	370.9	373.1	368.7	366.5	359.8	354.3	353.2	352.1
65°	317.8	315.5	322.2	321.1	323.3	317.8	315.5	311.1	306.7	305.6	304.5
67.5°	272.4	277.9	281.2	281.2	283.4	282.3	276.8	275.7	274.6	270.2	270.2
70°	239.2	242.5	249.1	250.2	249.1	251.3	246.9	245.8	244.7	242.5	241.4
72.5°	212.6	217.0	223.7	224.8	223.7	223.7	221.4	220.3	220.3	217.0	217.0
75°	191.5	197.1	202.6	202.6	202.6	200.4	198.2	198.2	196.0	194.9	192.7
77.5°	173.8	180.5	184.9	183.8	182.7	180.5	180.5	177.2	173.8	173.8	171.6
80°	160.5	165.0	168.3	167.2	166.1	162.8	161.6	158.3	156.1	152.8	152.8
82.5°	146.1	151.7	153.9	152.8	150.6	147.3	146.1	143.9	141.7	140.6	138.4
85°	134.0	139.5	140.6	138.4	136.2	134.0	132.9	131.8	130.6	128.4	128.4
87.5°	121.8	127.3	127.3	126.2	124.0	122.9	121.8	120.7	119.6	118.5	117.4
90°	111.8	116.3	116.3	115.1	114.0	112.9	111.8	110.7	109.6	108.5	108.5
92.5°	101.9	106.3	106.3	105.2	104.1	103.0	103.0	101.9	100.8	99.6	98.5
95°	93.0	97.4	97.4	97.4	96.3	95.2	95.2	94.1	93.0	93.0	91.9
97.5°	84.1	88.6	88.6	88.6	87.5	86.4	86.4	85.3	85.3	85.3	84.1
100°	76.4	79.7	80.8	80.8	79.7	79.7	79.7	78.6	78.6	78.6	77.5
102.5°	68.6	72.0	74.2	74.2	74.2	73.1	73.1	73.1	73.1	73.1	72.0
105°	62.0	65.3	67.5	68.6	68.6	68.6	68.6	68.6	68.6	68.6	68.6
107.5°	56.5	59.8	62.0	63.1	64.2	64.2	65.3	65.3	65.3	65.3	65.3
110°	50.9	54.3	57.6	58.7	59.8	60.9	60.9	62.0	60.9	60.9	60.9

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	45.4	49.8	52.0	54.3	55.4	56.5	57.6	57.6	57.6	57.6	57.6
115°	41.0	45.4	47.6	49.8	52.0	53.1	53.1	54.3	54.3	54.3	53.1
117.5°	36.5	41.0	43.2	45.4	46.5	48.7	49.8	49.8	49.8	49.8	48.7
120°	33.2	36.5	38.8	41.0	43.2	44.3	45.4	45.4	45.4	45.4	45.4
122.5°	28.8	32.1	35.4	37.6	38.8	39.9	41.0	41.0	41.0	41.0	41.0
125°	25.5	28.8	31.0	33.2	34.3	36.5	36.5	36.5	36.5	36.5	36.5
127.5°	22.1	25.5	27.7	29.9	31.0	32.1	33.2	33.2	33.2	33.2	33.2
130°	18.8	22.1	24.4	26.6	27.7	28.8	28.8	29.9	29.9	29.9	29.9
132.5°	16.6	18.8	21.0	23.3	24.4	25.5	25.5	26.6	26.6	26.6	26.6
135°	13.3	16.6	17.7	19.9	21.0	22.1	22.1	23.3	23.3	23.3	23.3
137.5°	11.1	13.3	15.5	17.7	18.8	18.8	19.9	19.9	21.0	21.0	21.0
140°	8.9	10.0	13.3	14.4	15.5	16.6	17.7	17.7	17.7	17.7	17.7
142.5°	6.6	8.9	10.0	12.2	13.3	14.4	15.5	15.5	15.5	15.5	15.5
145°	5.5	6.6	7.8	10.0	11.1	12.2	13.3	13.3	13.3	13.3	13.3
147.5°	4.4	5.5	6.6	7.8	8.9	10.0	11.1	11.1	11.1	11.1	11.1
150°	3.3	4.4	5.5	5.5	6.6	7.8	8.9	10.0	10.0	10.0	10.0
152.5°	3.3	3.3	4.4	4.4	5.5	6.6	7.8	7.8	7.8	7.8	7.8
155°	2.2	3.3	3.3	3.3	4.4	4.4	5.5	6.6	6.6	6.6	6.6
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2143.5	2147.9	2145.7	2142.4	2141.3	2146.8	2141.3	2115.8	2125.8	2126.9	2134.7
5°	2140.2	2143.5	2141.3	2139.1	2135.8	2142.4	2135.8	2109.2	2119.2	2120.3	2128.0
7.5°	2162.3	2163.4	2163.4	2157.9	2149.1	2152.4	2143.5	2113.6	2119.2	2119.2	2124.7
10°	2217.7	2219.9	2223.2	2208.8	2197.8	2188.9	2176.7	2140.2	2139.1	2130.2	2130.2
12.5°	2289.7	2284.1	2278.6	2271.9	2263.1	2252.0	2234.3	2191.1	2176.7	2162.3	2147.9
15°	2310.7	2308.5	2307.4	2304.1	2298.5	2295.2	2281.9	2238.7	2217.7	2200.0	2174.5
17.5°	2255.3	2259.8	2274.2	2275.3	2281.9	2295.2	2293.0	2263.1	2244.3	2236.5	2205.5
20°	2155.7	2156.8	2174.5	2182.3	2211.1	2233.2	2249.8	2246.5	2242.1	2250.9	2227.7
22.5°	2036.1	2043.9	2062.7	2074.9	2102.5	2128.0	2154.6	2169.0	2192.2	2228.8	2224.3
25°	1873.4	1883.3	1909.9	1929.8	1968.6	2007.3	2042.8	2068.2	2095.9	2165.7	2188.9
27.5°	1678.5	1694.0	1728.3	1748.2	1802.5	1842.4	1893.3	1943.1	1981.9	2061.6	2109.2
30°	1473.7	1487.0	1523.5	1551.2	1597.7	1651.9	1716.1	1787.0	1851.2	1932.0	1991.8
32.5°	1282.1	1296.5	1326.4	1350.8	1402.8	1448.2	1519.1	1606.5	1666.3	1778.1	1857.9
35°	1114.9	1128.2	1149.3	1170.3	1213.5	1260.0	1320.9	1406.1	1482.5	1598.8	1699.5
37.5°	997.6	999.8	1012.0	1024.1	1056.3	1091.7	1139.3	1214.6	1285.4	1410.6	1521.3
40°	913.4	913.4	920.1	923.4	937.8	958.8	988.7	1047.4	1106.1	1201.3	1336.4
42.5°	861.4	859.2	859.2	860.3	859.2	869.1	886.9	914.5	966.6	1045.2	1150.4
45°	822.6	818.2	814.9	807.1	802.7	802.7	803.8	813.8	843.7	894.6	979.9
47.5°	779.5	778.4	772.8	764.0	756.2	750.7	741.8	738.5	747.4	776.1	833.7
50°	729.6	724.1	718.6	711.9	703.1	697.5	680.9	682.0	674.3	687.6	717.5
52.5°	656.6	652.1	649.9	644.4	641.1	638.8	625.6	612.3	609.0	611.2	622.2
55°	575.7	578.0	569.1	573.5	572.4	562.5	556.9	547.0	543.6	542.5	548.1
57.5°	491.6	493.8	488.3	492.7	492.7	487.2	483.8	483.8	476.1	469.4	477.2
60°	415.2	410.8	414.1	419.6	419.6	416.3	414.1	414.1	408.6	406.3	411.9
62.5°	353.2	348.8	352.1	357.6	358.7	356.5	354.3	354.3	347.7	347.7	352.1
65°	305.6	306.7	305.6	310.0	310.0	311.1	308.9	306.7	298.9	302.3	301.2
67.5°	271.3	270.2	270.2	274.6	273.5	275.7	273.5	270.2	264.6	260.2	259.1
70°	242.5	241.4	241.4	243.6	244.7	244.7	243.6	241.4	233.6	229.2	225.9
72.5°	217.0	215.9	217.0	218.1	219.2	220.3	219.2	217.0	210.4	204.8	199.3
75°	193.8	192.7	196.0	196.0	197.1	197.1	198.2	197.1	191.5	184.9	178.3
77.5°	170.5	171.6	174.9	176.0	178.3	179.4	180.5	180.5	174.9	169.4	160.5
80°	151.7	153.9	156.1	157.2	159.4	162.8	163.9	165.0	160.5	155.0	145.0
82.5°	138.4	139.5	141.7	142.8	146.1	147.3	148.4	150.6	148.4	142.8	131.8
85°	127.3	128.4	130.6	130.6	132.9	135.1	136.2	137.3	136.2	130.6	119.6
87.5°	117.4	118.5	119.6	120.7	121.8	122.9	124.0	125.1	124.0	118.5	108.5
90°	108.5	108.5	109.6	109.6	110.7	111.8	114.0	114.0	112.9	108.5	98.5
92.5°	98.5	99.6	99.6	100.8	101.9	103.0	104.1	104.1	103.0	98.5	89.7
95°	91.9	91.9	93.0	93.0	94.1	94.1	95.2	95.2	94.1	89.7	80.8
97.5°	84.1	84.1	84.1	84.1	85.3	85.3	86.4	86.4	85.3	80.8	73.1
100°	77.5	77.5	77.5	77.5	77.5	78.6	78.6	78.6	77.5	73.1	65.3
102.5°	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	69.8	66.4	58.7
105°	68.6	68.6	68.6	67.5	67.5	67.5	66.4	66.4	63.1	59.8	53.1
107.5°	64.2	64.2	64.2	63.1	63.1	62.0	60.9	60.9	57.6	54.3	47.6
110°	60.9	60.9	60.9	59.8	58.7	57.6	56.5	55.4	52.0	47.6	42.1



TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	57.6	57.6	56.5	56.5	55.4	54.3	52.0	50.9	47.6	43.2	37.6
115°	53.1	53.1	53.1	52.0	50.9	49.8	48.7	46.5	43.2	38.8	33.2
117.5°	48.7	48.7	48.7	47.6	46.5	45.4	44.3	42.1	38.8	34.3	29.9
120°	44.3	44.3	44.3	43.2	42.1	41.0	39.9	37.6	34.3	31.0	25.5
122.5°	41.0	41.0	39.9	38.8	37.6	36.5	35.4	33.2	31.0	26.6	22.1
125°	36.5	36.5	35.4	35.4	34.3	33.2	32.1	29.9	26.6	23.3	19.9
127.5°	33.2	32.1	32.1	32.1	31.0	29.9	27.7	26.6	23.3	19.9	16.6
130°	28.8	28.8	28.8	27.7	27.7	26.6	24.4	22.1	19.9	17.7	14.4
132.5°	25.5	25.5	25.5	25.5	24.4	23.3	21.0	19.9	17.7	14.4	12.2
135°	23.3	23.3	22.1	22.1	21.0	19.9	18.8	16.6	14.4	12.2	10.0
137.5°	19.9	19.9	19.9	18.8	18.8	17.7	15.5	14.4	13.3	11.1	8.9
140°	17.7	17.7	16.6	16.6	15.5	15.5	14.4	12.2	11.1	8.9	7.8
142.5°	15.5	15.5	14.4	14.4	13.3	13.3	12.2	11.1	8.9	7.8	5.5
145°	13.3	13.3	12.2	12.2	12.2	11.1	10.0	8.9	7.8	6.6	5.5
147.5°	11.1	11.1	11.1	10.0	10.0	8.9	8.9	7.8	6.6	5.5	4.4
150°	10.0	10.0	8.9	8.9	8.9	7.8	6.6	6.6	5.5	4.4	3.3
152.5°	7.8	7.8	7.8	7.8	6.6	6.6	5.5	5.5	4.4	3.3	3.3
155°	6.6	6.6	6.6	5.5	5.5	5.5	4.4	4.4	3.3	3.3	2.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5	2143.5
2.5°	2131.3	2130.2	2140.2	2139.1	2125.8	2145.7	2159.0
5°	2125.8	2124.7	2133.6	2135.8	2121.4	2142.4	2156.8
7.5°	2121.4	2120.3	2130.2	2133.6	2119.2	2138.0	2153.5
10°	2122.5	2116.9	2125.8	2128.0	2114.7	2134.7	2147.9
12.5°	2130.2	2116.9	2120.3	2120.3	2108.1	2125.8	2140.2
15°	2149.1	2121.4	2116.9	2113.6	2098.1	2114.7	2129.1
17.5°	2170.1	2132.4	2116.9	2105.9	2087.0	2101.4	2116.9
20°	2191.1	2144.6	2119.2	2101.4	2076.0	2089.3	2100.3
22.5°	2201.1	2155.7	2121.4	2094.8	2062.7	2069.3	2081.5
25°	2187.8	2151.3	2116.9	2084.8	2046.1	2047.2	2057.2
27.5°	2139.1	2129.1	2107.0	2074.9	2032.8	2027.3	2035.0
30°	2056.0	2083.7	2084.8	2061.6	2017.3	2006.2	2009.5
32.5°	1939.8	2001.8	2038.3	2033.9	1995.2	1979.7	1981.9
35°	1805.8	1883.3	1963.0	1989.6	1961.9	1949.8	1945.3
37.5°	1645.3	1749.4	1855.6	1921.0	1916.5	1908.8	1904.4
40°	1468.1	1593.2	1719.5	1823.5	1855.6	1855.6	1857.9
42.5°	1278.8	1425.0	1563.3	1695.1	1770.4	1787.0	1793.6
45°	1096.1	1243.4	1393.9	1545.6	1646.4	1698.4	1717.2
47.5°	930.0	1078.4	1221.2	1387.3	1521.3	1588.8	1618.7
50°	788.3	899.0	1049.6	1214.6	1360.7	1443.8	1502.5
52.5°	671.0	757.3	889.1	1043.0	1190.2	1304.3	1358.5
55°	572.4	631.1	742.9	875.8	1016.4	1134.9	1198.0
57.5°	489.4	535.9	612.3	723.0	841.5	958.8	1026.4
60°	416.3	448.4	500.4	587.9	688.7	789.4	854.7
62.5°	353.2	374.2	408.6	472.8	551.4	630.0	690.9
65°	304.5	313.3	332.2	372.0	431.8	491.6	543.6
67.5°	256.9	262.4	276.8	301.2	331.0	374.2	408.6
70°	221.4	221.4	222.5	236.9	252.4	280.1	304.5
72.5°	192.7	189.3	182.7	186.0	189.3	204.8	220.3
75°	169.4	161.6	150.6	146.1	143.9	146.1	155.0
77.5°	149.5	138.4	125.1	114.0	105.2	101.9	109.6
80°	132.9	119.6	104.1	89.7	75.3	67.5	70.9
82.5°	119.6	103.0	86.4	69.8	53.1	42.1	42.1
85°	105.2	89.7	72.0	54.3	37.6	23.3	21.0
87.5°	95.2	78.6	59.8	43.2	26.6	12.2	6.6
90°	85.3	68.6	50.9	34.3	18.8	5.5	0.0
92.5°	76.4	60.9	44.3	27.7	13.3	3.3	0.0
95°	68.6	54.3	37.6	23.3	11.1	2.2	1.1
97.5°	60.9	47.6	33.2	18.8	7.8	2.2	1.1
100°	55.4	42.1	28.8	15.5	6.6	1.1	1.1
102.5°	48.7	37.6	24.4	13.3	5.5	1.1	1.1
105°	43.2	33.2	21.0	11.1	4.4	1.1	1.1
107.5°	38.8	28.8	18.8	10.0	4.4	1.1	1.1
110°	34.3	25.5	16.6	8.9	3.3	1.1	1.1

TEST NUMBER: P1213150

CATALOG NUMBER: 4SNLED-LD5-64HL-LC-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	31.0	22.1	14.4	7.8	2.2	1.1	1.1
115°	26.6	19.9	12.2	6.6	2.2	1.1	1.1
117.5°	23.3	16.6	11.1	5.5	2.2	1.1	1.1
120°	19.9	14.4	8.9	4.4	1.1	1.1	1.1
122.5°	17.7	12.2	7.8	4.4	1.1	1.1	1.1
125°	15.5	11.1	6.6	3.3	1.1	1.1	1.1
127.5°	13.3	8.9	5.5	2.2	1.1	1.1	1.1
130°	11.1	7.8	4.4	2.2	1.1	1.1	1.1
132.5°	8.9	6.6	4.4	2.2	1.1	1.1	1.1
135°	7.8	5.5	3.3	2.2	1.1	1.1	1.1
137.5°	6.6	4.4	2.2	2.2	2.2	1.1	1.1
140°	5.5	3.3	2.2	2.2	2.2	2.2	1.1
142.5°	4.4	3.3	2.2	2.2	2.2	2.2	1.1
145°	3.3	2.2	2.2	2.2	2.2	2.2	1.1
147.5°	3.3	2.2	2.2	2.2	2.2	2.2	1.1
150°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
152.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
155°	2.2	2.2	2.2	2.2	2.2	2.2	2.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)